AMENDMENTS

TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.　(currently amended): A system for despreading a spread spectrum signal using a pseudo-noise ("PN") code, wherein the spread spectrum signal comprises a plurality of signal samples, each signal sample having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of PN code chips, the system comprising:

a switch for selecting one of the in-phase portion and the quadrature-phase portion of a first signal sample of the plurality of signal samples;

a first multiplier coupled to the switch for multiplying the selected portion of ~~one of the plurality of signal samples~~the first signal sample with [[one]]a first PN code chip of the plurality of PN code chips to obtain a first product, where the selected portion of ~~one of~~ the ~~plurality of~~ signal ~~samples~~sample is first provided to an odd-even switch and is either an even portion [[of]]or an odd portion of the selected portion of the first signal sample~~plurality of signal samples~~;

a second multiplier coupled to the switch for multiplying [[the]]a selected portion of a second signal sample of the plurality of signal samples with the [[one]]first PN code chip to obtain a second product, wherein the second signal sample~~of the plurality of signal samples~~ succeeds the first signal sample~~one of the plurality of signal samples~~,

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where the selected portion of the second signal sample~~of the plurality of signal samples~~ is first provided to [[an]]the odd-even switch and is either an even portion [[of]]or an odd portion of the selected portion of the second signal sample~~plurality of signal samples~~; and

a first adder coupled to the first multiplier and the second multiplier for adding the first product with the second product to obtain a first sum.

2. (canceled).

3. (currently amended):   The system of claim 1, further comprising:

a third multiplier coupled to a second switch for multiplying [[the]]a selected portion of a third signal sample with a second PN code chip of the plurality of PN code chips, wherein the third signal sample succeeds the second signal sample~~samples~~ and wherein the second PN code chip succeeds the [[one]]first PN code chip and the selected portion [[is]] of the third signal sample is selected with [[an]]a second odd-even switch and is either an even portion or an~~a second~~ odd portion of the selected portion of the third signal sample;

a fourth multiplier coupled to the second switch for multiplying [[the]]a selected portion of a fourth signal sample with the second PN code chip to obtain a fourth product, wherein the selected portion of the fourth signal sample~~samples~~ succeeds the third signal sample and the selected portion of the fourth signal sample is provided to the second odd-even switch and is either an even portion or an odd portion of the selected portion of the fourth signal sample;

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a second adder coupled to the third multiplier and the fourth multiplier for adding

the third product with the fourth product to obtain a second sum; and

a third adder coupled to the first adder and the second adder for adding the first

sum with the second sum.

4. (canceled).

5. (canceled).

6. (currently amended):   A method for despreading a spread spectrum signal

using a PN code, wherein the spread spectrum signal comprises a plurality of signal

samples, each signal sample having an in-phase portion and a quadrature-phase portion,

and wherein the PN code comprises a plurality of PN code chips, the method comprising:

selecting one of the in-phase portion and the quadrature-phase portion of a first

signal sample of the plurality of signal samples;

combining the selected portion of the first signal sampleone of the plurality of

signal samples with onea first PN code chip of the plurality of PN code chips to obtain a

first product, where the selected portion is either an odd selected portion or an even

selected portion of the selected portion of the first signal sample as selected by an odd-

even switch;

combining the selected portion of a second signal sample of the plurality of signal

samples with the first PN code chipone of the plurality of PN stage code chips to obtain a

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second product, wherein the second ~~signal sample~~<u>signal sample</u>~~of the plurality of signal samples~~

succeeds the <u>first signal sample</u>~~one of the plurality of signal samples~~, where the selected

portion is either an odd ~~selected~~-portion or an even ~~selected~~-portion <u>of the selected</u>

<u>portion of the second signal sample</u> as selected by the odd-even switch; and

grouping the first product with the second product to obtain a first sum.

7. (canceled).

8. (currently amended):   The method of claim 6, further comprising:

combining [[the]]<u>a</u> selected portion of a third signal sample of the plurality of

signal samples with a second <u>PN code chip</u> from the plurality of PN code chips to obtain

a third product, wherein the third <u>signal sample</u> ~~of the plurality of signal samples~~

succeeds the second <u>signal sample</u> ~~of the plurality of signal samples~~ and wherein the

second <u>PN code chip</u> ~~of the plurality of PN code chips~~ succeeds the <u>first PN code chip</u>

~~one of the plurality of PN code chips~~ and the selected portion is either an odd ~~selected~~

portion or an even ~~selected~~-portion of <u>the selected portion of</u> the third signal sample as

selected by a second odd-even switch;

combining the selected portion of a fourth signal sample of the plurality of signal

samples with the second <u>PN code chip</u> ~~of the plurality of PN code chips~~ to obtain a fourth

product, wherein the fourth <u>signal sample</u> ~~of the plurality of signal samples~~ succeeds the

third <u>signal sample</u> ~~of the plurality of signal samples~~ and the selected portion is either an

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odd ~~selected~~ portion or an even ~~selected~~ portion of <u>the selected portion of</u> the fourth signal sample as selected by the second odd-even switch;

grouping the third product with the fourth product to obtain a second sum; and

grouping the first sum with the second sum.

9. (canceled).

10. (currently amended):   The method of claim 6, further comprising:

combining [[the]]<u>a</u> selected portion of a third signal sample of the plurality of signal samples with a second ~~of the plurality~~ PN code chip of the plurality of PN code chips to obtain a third product, wherein the third <u>signal sample</u> ~~of the plurality of signal samples~~ succeeds the second <u>signal sample</u> ~~of the plurality of signal samples~~;

combining [[the]]<u>a</u> selected portion of a fourth <u>signal sample</u> of the plurality of signal samples with a third PN code chip of the plurality of PN code chips to obtain a fourth product, wherein the fourth <u>signal sample</u> ~~of the plurality of signal samples~~ succeeds the third <u>signal sample</u> ~~of the plurality of signal samples~~ and wherein the third <u>PN code chip</u> ~~of the plurality of PN code chips~~ succeeds the second <u>PN code chip</u> ~~of the plurality of PN code chips~~;

grouping the third product with the fourth product to obtain a second sum; and

grouping the first sum with the second sum.

11-15. (canceled).

16. (currently amended): A ~~computer readable~~computer-readable medium having software for despreading a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal samples, each signal sample having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of PN code chips, the ~~computer-readable~~computer-readable medium comprising:

means for selecting one of the in-phase portion and the quadrature-phase portion of a first signal sample of the plurality of signal samples;

means for selecting one of an even PN code stage and an odd PN code stage from a first PN code chip of the[[one]] plurality of PN code chips;

means for multiplying the selected portion of the first signal sample~~one of the plurality of signal samples~~ with ~~one of~~the selected ~~even~~PN code stage ~~and odd PN code stage~~to obtain a first product; and

means for multiplying the selected portion of a second signal sample of the plurality of signal samples with the ~~one of the plurality of~~first PN code chip~~chips~~ to obtain a second product, wherein the second signal sample~~of the plurality of signal samples~~ succeeds the first signal sample~~one of the plurality of signal samples~~; and

means for adding the first product with the second product to obtain a first sum.

17. (canceled).

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18. (currently amended): The ~~computer readable~~computer-readable medium of claim 16, further comprising:

means for multiplying [[the]]a selected portion of a third signal sample of the plurality of signal samples with a second PN code chip of the plurality of PN code chips to obtain a third product, wherein the third signal sample ~~of the plurality of signal samples~~ succeeds the second signal sample ~~of the plurality of signal samples~~ wherein the second PN code chip ~~of the plurality of PN code chips~~ succeeds the first PN code chip ~~one of the plurality of PN code chips~~;

means for multiplying [[the]]a selected portion of a fourth signal sample of the plurality of signal samples with the second PN code chip ~~of plurality of PN code chips~~ to obtain a fourth product, wherein the fourth signal sample succeeds the third signal sample ~~samples~~;

means for adding the third product with the fourth product to obtain a second sum; and

means for adding the first sum with the second sum.

19. (canceled).

20. (currently amended): The ~~computer-readable~~computer-readable medium of claim 16, further comprising:

means for multiplying [[the]]a selected portion of a third signal sample of the plurality of signal samples with a second PN code chip of the plurality of PN code chips

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to obtain a third product, wherein the third signal sample succeeds the second signal sample;

means for multiplying [[the]]a selected portion of a fourth signal sample of the plurality of signal samples with a third PN code chip of the plurality of PN code chips to obtain a fourth product, wherein the fourth signal sample succeeds the third signal sample and the third PN code chip succeeds the second PN code chip;

means for adding the third product with the fourth product to obtain a second sum; and

means for adding the first sum with the second sum.

21. (currently amended): A system for despreading a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal sample pairs, each signal sample pair comprising an even signal sample and an odd signal sample, each signal sample having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of PN code chips, the system comprising:

a first switch for selecting one of the in-phase portion and the quadrature-phase portion of a first signal sample pair of the plurality of signal sample pairs;

a second switch coupled to the first switch for selecting one of the even sample and the odd sample of the selected portion of the first signal sample pair; and

a first multiplier coupled to the second switch for multiplying the selected portion of the selected sample of the first signal sample pairone of the plurality of signal sample

~~pairs~~ with ~~one~~a first PN code chip of the plurality of PN code chips to obtain a first product.

22. (currently amended): The system of claim 21, further comprising:

a second multiplier coupled to the second switch for multiplying [[the]]a selected portion of the selected sample of a second signal sample pair of the plurality of signal sample pairs with a second PN code chip of the plurality of PN code chips to obtain a second product, wherein the second signal sample pair ~~of the plurality of signal sample pairs~~ succeeds the first signal sample pair ~~one of the plurality of signal sample pairs~~, and the second PN code chip ~~of the plurality of PN code chips~~ succeeds the first PN code chip ~~one of the plurality of PN code chips~~; and

an adder coupled to the first multiplier and the second multiplier for adding the first product with the second product to obtain a first sum.

23. (canceled).

24. (canceled).

25. (currently amended): A method for despreading a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal sample pairs, each signal sample pair comprising an even signal sample and an odd signal

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sample, each signal sample having an in-phase portion and a quadrature-phase portion, and wherein the PN code comprises a plurality of PN code chips, the method comprising:

selecting one of the in-phase portion and the quadrature-phase portion of a first signal sample pair of the plurality of signal sample pairs;

selecting one of the even sample and the odd sample of the selected portion of the first signal sample pair; and

combining the selected portion of the selected sample of the first signal sample pair one of the plurality of signal sample pairs with a first PN code chip of the plurality of PN code chips to obtain a first product.

26. (currently amended): The method of claim 25, further comprising:

combining [[the]]a selected portion of the selected sample of a second signal sample pair of the plurality of signal sample pairs with a second PN code chip of the plurality of PN code chips to obtain a second product, wherein the second signal sample pair of the plurality of signal sample pairs succeeds the first signal sample pair one of the plurality of signal sample pairs, and the second PN code chip of the plurality of PN code chips succeeds the first PN code chip one of the plurality of PN code chips; and

grouping the first product with the second product to obtain a first sum.

27-32. (canceled).

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33. (currently amended): A ~~computer-readable~~computer-readable medium having software for despreading a spread spectrum signal using a PN code, wherein the spread spectrum signal comprises a plurality of signal sample pairs, each pair comprising an even signal sample and an odd signal sample, each signal sample having an in-phase portion and a quadrature-portion, and wherein the PN code comprises a plurality of <u>PN code</u> chips, the ~~computer-readable~~computer-readable medium comprising:

means for selecting one of the in-phase portion and the quadrature-phase portion <u>of a first signal sample pair of the plurality of signal sample pairs</u>;

means for selecting one of the even sample and the odd sample <u>of the selected portion of the first signal sample pair</u>; and

means for multiplying the selected portion of the selected sample of <u>the first signal sample pair</u> ~~one of the plurality of signal sample pairs~~ with <u>the first PN code chip</u> ~~one of the plurality of PN code chips~~ to obtain a first product.

34. (currently amended): The ~~computer-readable~~computer-readable medium of claim 33, further comprising:

means for multiplying the selected portion of the selected sample of a second <u>signal sample pair</u> of the plurality of signal sample pairs with a second <u>PN code chip</u> of the plurality of PN code chips to obtain a second product, wherein the second <u>signal sample pair</u> ~~of the plurality of signal sample pairs~~ succeeds the <u>first signal sample pair</u> ~~one of the plurality of signal sample pairs~~, and the second <u>PN code chip</u> ~~of the plurality of PN code chips~~ succeeds the <u>first PN code chip</u> ~~one of the plurality of PN code chips~~; and

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means for adding the first product with the second product to obtain a first sum.

35-65. (canceled).